

Int. Appl. No. : PCT/IB/2005/000192
Int. Filing Date : January 27, 2005

AMENDMENTS TO THE SPECIFICATION

Please add the following header and paragraph immediately after the Title of the Invention:

Related Applications

This application is a US National Phase of International Application No. PCT/IB2005/000192, filed January 27, 2005, designating the US and published in English on September 1, 2005 as WO 2005/080561, which claims the benefit of South African Patent Application No. 2004/0685, filed January 28, 2004.

Please add the following header on page 1 immediately above line 9:

Field of the Invention

Please add the following header on page 1 immediately above line 13:

Description of the Related Art

Please add the following header on page 2 immediately above line 9:

Summary of the Invention

Please add the following header on page 9 immediately above line 20:

Brief Description of the Drawings

Please add the following header on page 9 immediately above line 30:

Detailed Description of the Preferred Embodiment

Please replace the paragraph on page 9, line 32 through page 10, line 7 with the following amended paragraph:

1 g of lipase Amano AK was added to 195 g phosphate buffered saline (PBS) solution (pH 7.8) and 5 g mineral oil (Castrol). This blend was then homogenized for 5 minutes using a Silverson L4R laboratory rotor-stator homogenizer at 6000 rpm. 1.5 g of hexamethylene di-isocyanate (Merck Schuchardt) was added to the emulsion. The emulsion was then stirred at room temperature for 2 hours. The cross-linked enzyme structures were then recovered by filtration using 0.45 µm filter paper and washed 5 times with 50 ml of PBS each time (total 250 ml PBS). Figure 1 shows typical stabilized enzyme spheres or structures obtained according to the method. Particle ~~sized~~ sizes were determined using laser light scattering (Malvern Mastersizer 2000), and an average Sauter mean diameter of 49.4 µm was obtained (see Fig. 2).

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Please replace the paragraph on page 11, lines 1-7 with the following amended paragraph:

After crosslinking the emulsion was centrifuged at 10000 rpm for 5 minutes using a Beckman J2-21 ME centrifuge fitted with JA 20.1 rotor, after which the oil phase was removed. The pellet was washed thrice with 10 ml of 100 mM Tris-Cl buffer (pH 8.0) and pellet was recovered using centrifugation as mentioned above. After washing the pellet was resuspended in 1 ml buffer and assayed for enzyme activity. Figure 3 + shows the enzyme spheres obtained. The spheres had a narrow size distribution between about 10 and 100 μ m (Figure 4 2).

Please replace the paragraph on page 14, lines 28-31 with the following amended paragraph:

Activity retention of spheres as compared to CLEA's with p-nitrophenylpalmitate as the substrate was measured as 2.7% for lipase spheres and 3.4% for CLEA's while activity with p-nitrophenylbutyrate as the substrate was measured as 53.7% for lipase spheres and 6.5% for CLEA's.

Please replace the header "CLAIMS:" on page 17 with the following header:
WHAT IS CLAIMED IS:

Please add an Abstract provided herewith as the last page of the Specification.